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NUS CORPORATION
99 WEST VALLEY ROAD
WAYNE, PENNSYLVANIA 19087
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(ed)

May 2, 1991
R-585-5-1-1
68-01-7346

Mr. Gregory Ham
U.S. Environmental Protection Agency
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107

Subject: Sampling Plan
TDD No. F3-9104-17
EPA DSN PA-1040
Facility No. PAD054142781
Keystone Sanitation
Hanover, Adams County, Pennsylvania

Dear Mr, Ham:

Submitted herewith is a sampling plan for the home well sampling in support of a remedial investigation at the subject site. The home well sampling has been scheduled for May 14 and 15, 1991. Permission to sample the home wells is being coordinated by EPA's remedial project manager, Deborah Dewsbury.

Summary

The site, located in Hanover, Adams County, Pennsylvania, is an approximately 40-acre landfill that is situated on a topographic high and is surrounded by homes that utilize domestic wells for their water supply. The subject site has been used as a landfill since 1966 to dispose domestic, municipal, industrial, and construction debris. The disposal method employed is the trench method; trenches on site are excavated to a depth of 10 to 15 feet. The exact nature and quantity of waste disposed are unknown.

Drinking Water Supply

All residents within the study area obtain their water from either public wells, domestic wells, or springs. The Littlestown Water Authority, which serves 3,026 people, obtains water from well fields located approximately 2.5 miles northwest of the landfill. All other residents within the study area apparently utilize domestic wells and springs for their water supply. The nearest domestic well is located on site.

Geology Information

The soils in the study area are well-drained silt loams. However, landfill operations have disturbed and/or removed native soils on site.

The site is underlain by phyllites of the Marburg Schist of the late Precambrian Wissahickon Formation. The topographical features of this formation are undulating hills of medium relief. The reddish-brown phyllite displays cleavage with even regularity that is closely spaced, open, and steeply dipping. Joints for the most part are irregular, poorly formed, and widely spaced.

Groundwater Information

The majority of the groundwater flow in the area is expected to be influenced by fractures in the underlying phyllite. Groundwater flow from the landfill is expected to be radial, and the major component of flow is to the north-northeast. The depth to groundwater at the site is approximately seven feet.

Sampling to Date

In February 1984, local residents hired Franklin Analytical Laboratories to perform an analysis of samples taken from local wells, springs, and streams surrounding the subject site. The sampling revealed up to 117 ppb dichloroethane, 38.7 ppb carbon tetrachloride, and 20 ppb 1,1,1-trichloroethane (1,1,1-TCEA) in nearby domestic wells.

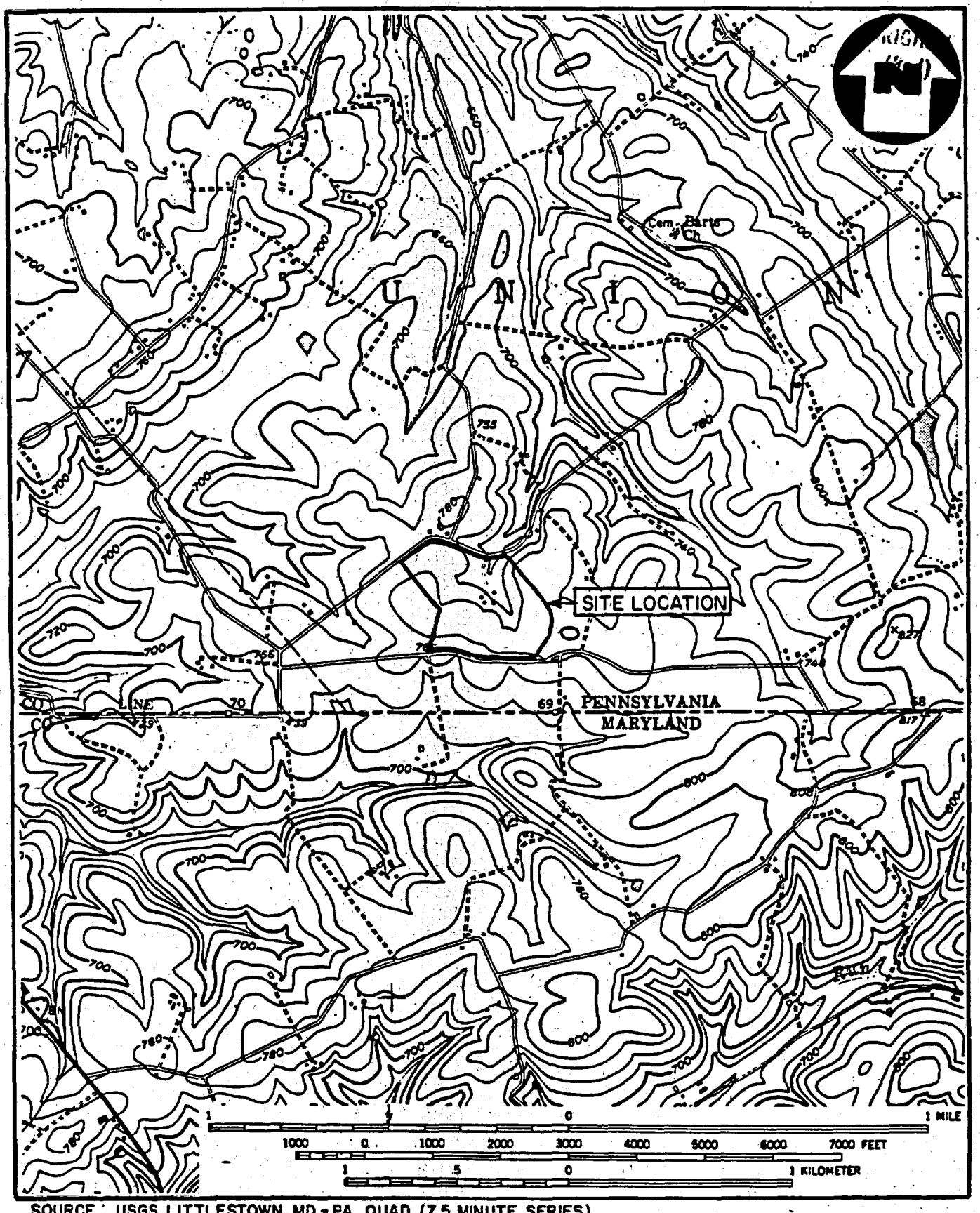
The Pennsylvania Department of Environmental Resources has also performed a sample analysis of the local residences. The analysis revealed up to 100 ppb 1,1,1-TCEA, 30 ppb vinyl chloride, and 17 ppb 1,2-dichloroethylene in nearby springs and wells.

FIT 3 conducted a site inspection at the subject site on April 16, and 17, 1984. Due to a laboratory problem, volatile organic compound samples from seven residential wells were collected on August 21, 1984. The analysis detected tetrachloroethylene (up to 265 ppb), 1,1,1-TCEA (up to 116 ppb), 1,1-dichloroethane (up to 6.1 ppb), 1,1-dichloroethylene (1,1-DCE) (up to 25 ppb), trichloroethylene (up to 6.5 ppb), and vinyl chloride (up to 59 ppb) in domestic wells surrounding the site. On-site monitoring wells revealed 1,1,1-TCEA (up to 783 ppb), tetrachloroethylene (up to 180 ppb), 1,1-DCE (up to 177 ppb), and vinyl chloride (up to 59 ppb).

Proposed Sampling Plan

The proposed sampling locations include the following:

- Up to 40 home wells surrounding the landfill will be sampled. These locations will be coordinated by EPA personnel.



SOURCE: USGS LITTLESTOWN, MD.-PA. QUAD. (7.5 MINUTE SERIES)

FIGURE 1

SITE LOCATION MAP

KEYSTONE SANITATION, HANOVER, PA.

SCALE 1:24000

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ORIGINAL
(Red)

A total of 44 aqueous samples may be obtained, including duplicates and blanks. The samples will be analyzed by Special Analytical Services as per method OLC01.0 for volatile organics with a low detection limit. All samples will be obtained in accordance with standard protocol as indicated on the site-specific work plan.

Linda LaSut has been appointed team leader and will be responsible for the sampling plan.

Please endorse below and return with your approval or amendments to this plan. If you have any questions, please feel free to contact either Andrew Frebowitz, Michael Heffron, or Ms. LaSut.

Respectfully,

Andrew Frebowitz
Assistant Manager

Michael Heffron
Section Supervisor

Patricia Armstrong
Quality Assurance

AF/rob

Attachments

Approved by: _____

Date: _____

Amendments: _____

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